

# PS-8750

USA Model  
E Model



## STEREO TURNTABLE SYSTEM

### SPECIFICATIONS

#### TURNTABLE (Semi-auto player)

Platter:	32 cm (12 $\frac{5}{8}$ inches), diecast aluminum
Drive System:	Direct drive, crystal lock control system
Speed:	33 $\frac{1}{3}$ rpm, 45 rpm
Pitch Control Range:	$\pm 4$ % (Crystal Lock Switch: OFF)
Wow and Flutter:	Less than $\pm 0.04$ % (DIN, weighted) Less than 0.025 % (NAB, weighted rms)
S/N Ratio:	Greater than 70 dB (DIN, B-curve weighted)

	Position of the Xtal Lock Switch	
	ON	OFF
Initial Drift:	within 0.0005 %	within 0.1 %
Load Characteristics: (at 3 g tracking force)	0 %	less than 0.5 %
Speed Deviation:	within 0.003 %	variable

#### TONEARM

Type:	Statically balanced, universal
Arm Length:	320 mm (12 $\frac{5}{8}$ inches), overall 237 mm (9 $\frac{3}{8}$ inches), pivot-to-stylus
Overhang:	15 mm (1 $\frac{1}{32}$ inches)
Tracking Error:	+ 2°, -2°
Tracking-force Adjustment Range:	0-2.5 g (calibrated every 0.25 g)

#### Tonearm Height

Adjustment Range: 7 mm (9/32 inches)

Shell Weight: 12.5 g (SH-160)

#### Cartridge Weight

Range: 3-10 g  
(8-14 g with extra weight)  
(13.5-19.5 g with extra weight)

#### GENERAL

Power Requirements: 120 V ac, 60 Hz (USA Model)  
110, 127, 220 or 240 V ac, 50/60 Hz  
(E Model)

Power Consumption: 20 W

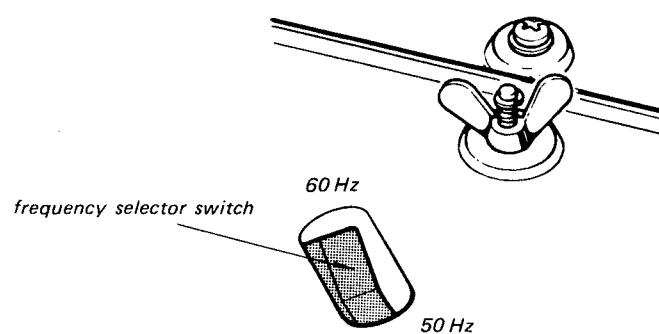
Dimensions: 458(w) x 184(h) x 395(d) mm  
18 $\frac{1}{16}$ (w) x 7 $\frac{1}{4}$ (h) x 15 $\frac{5}{16}$ (d) inches  
including projecting parts and controls.

Weight: Approx. 14.2 kg, 31 lb 5 oz (net)  
Approx. 19 kg, 41 lb 14 oz (with shipping  
carton)

**SONY**  
**SERVICE MANUAL**

**NOTE: SELECTION OF POWER FREQUENCY****Procedure:**

1. Remove the turntable.
2. Make sure the power frequency of the area this set is used in, and then select the position of Frequency Selector Switch shown in figure below.



SECTION 1  
OUTLINE

1-1. BLOCK DIAGRAM

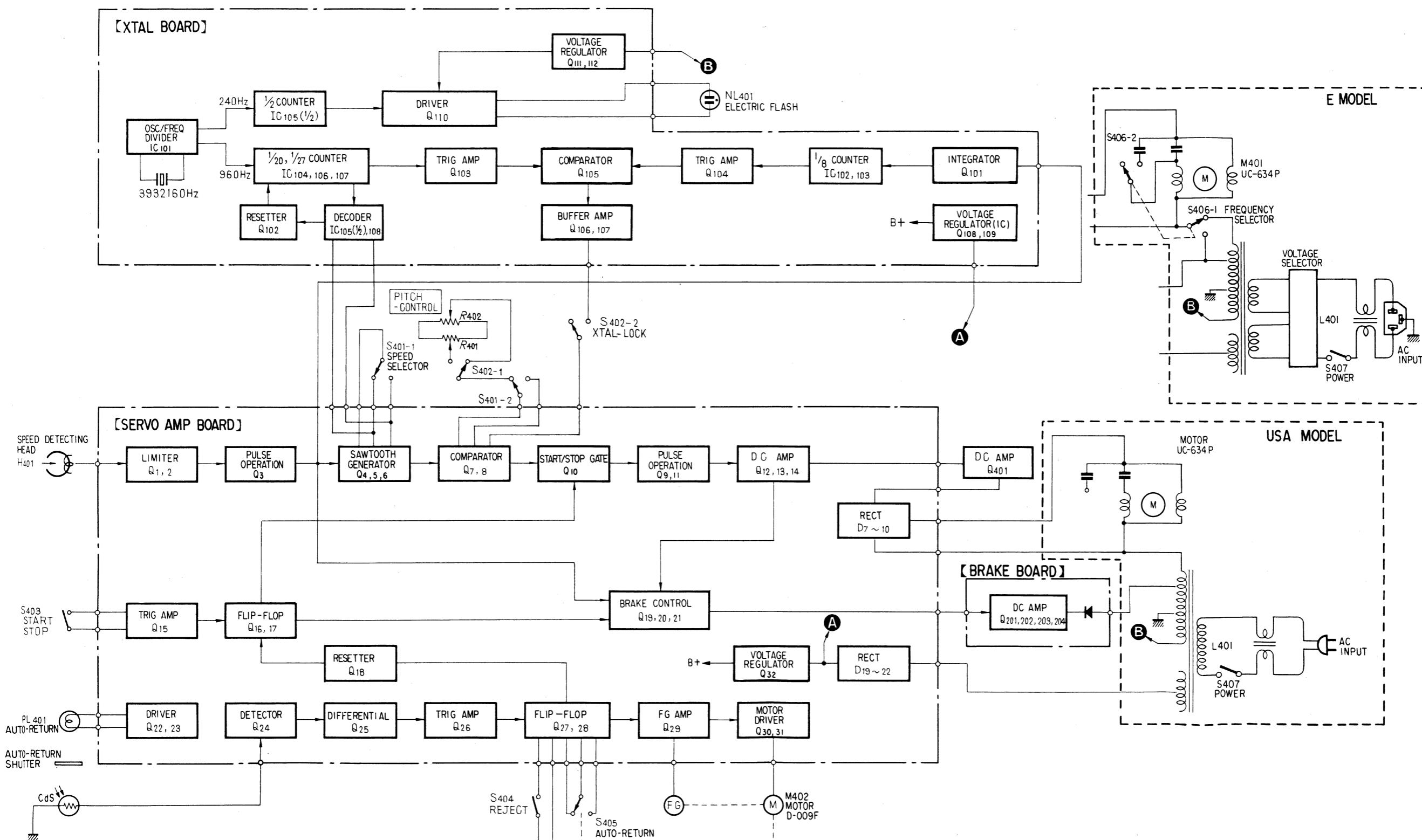


Fig. 1-1. Block diagram

## 1-2. EXTERNAL VIEW

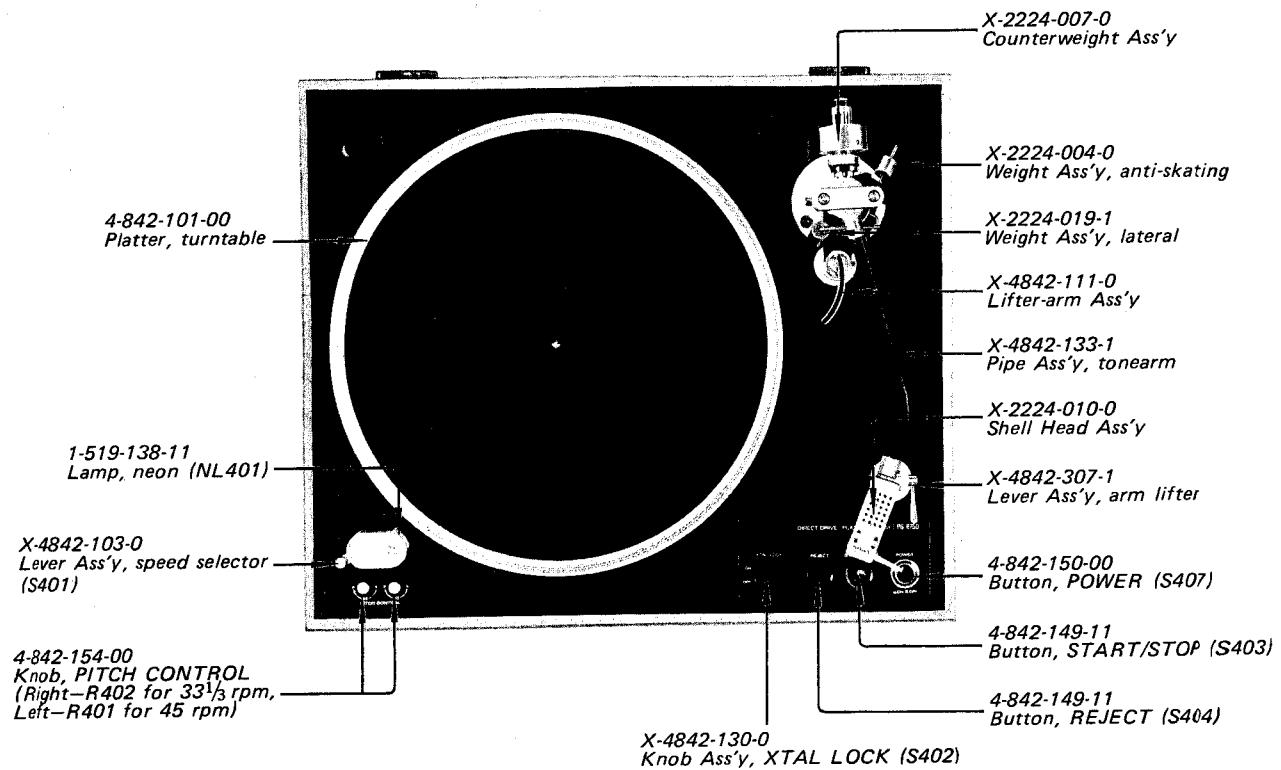


Fig. 1-2. External view

## 1-3. INTERNAL VIEW

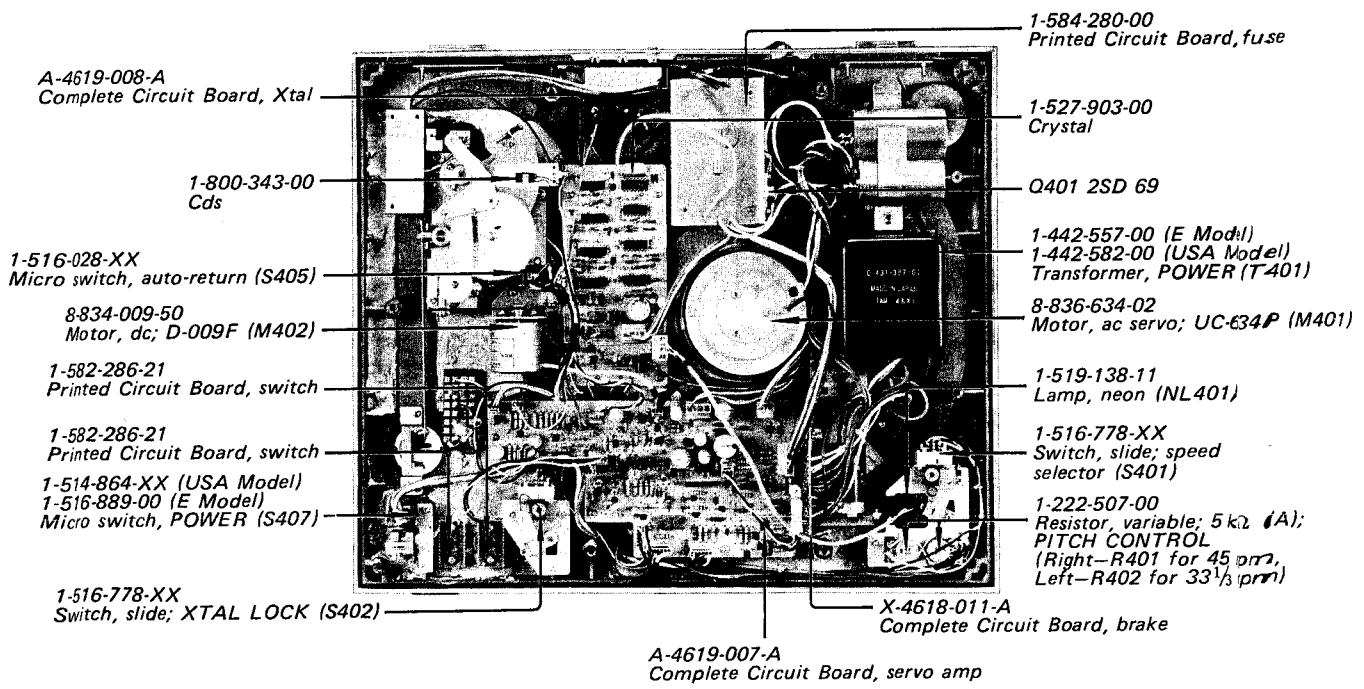


Fig. 1-3. Internal view

## SECTION 2 DISASSEMBLY AND REPLACEMENT

### 2-1. TOP COVER REMOVAL

1. Open the top cover ( 1 ).
2. Lift the top cover toward ( 2 ).

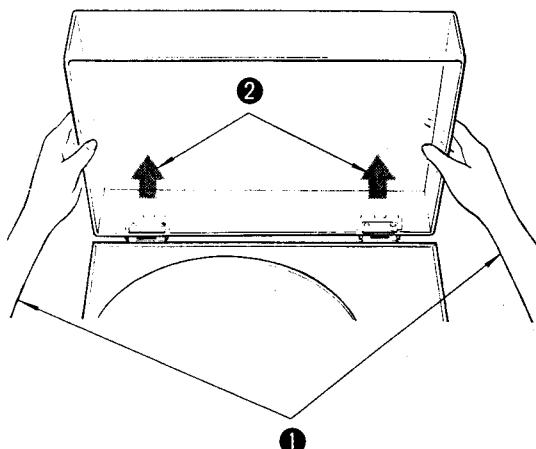


Fig. 2-1. Top cover removal

### 2-2. BOTTOM BOARD REMOVAL

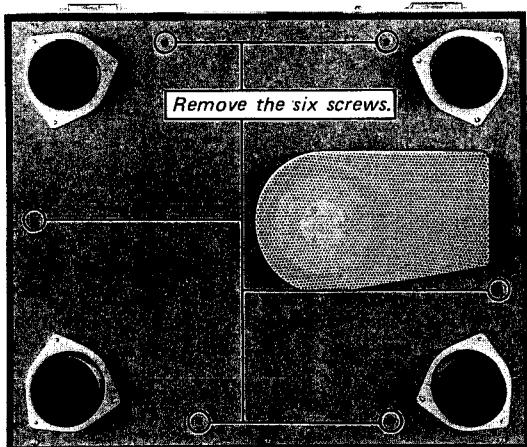


Fig. 2-2. Bottom board removal

### 2-3. CARTRIDGE REPLACEMENT

1. Pull out the four lead wires ( 1 ).
2. Loosen the two screws and then replace the cartridge ( 2 ).
3. Connect the four lead wires to the cartridge as shown in Fig. 2-3. (c).

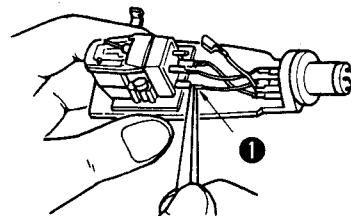


Fig. 2-3. (a) Pulling lead wires

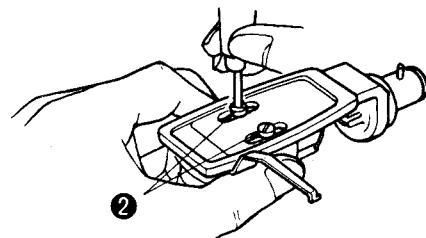


Fig. 2-3. (b) Loosening screws

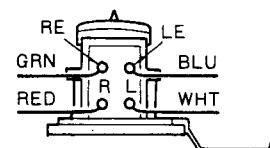
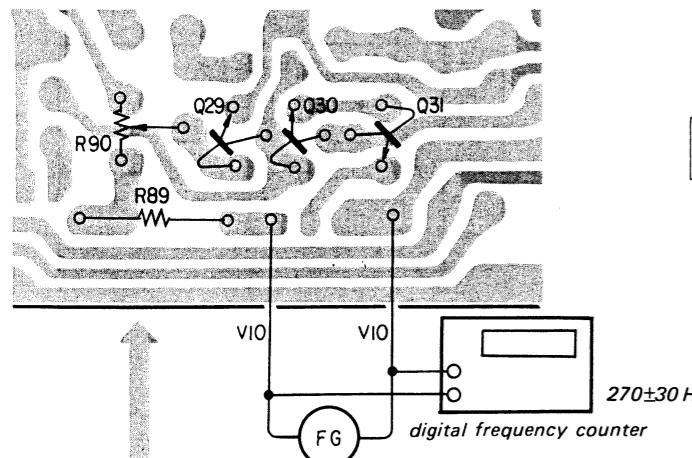


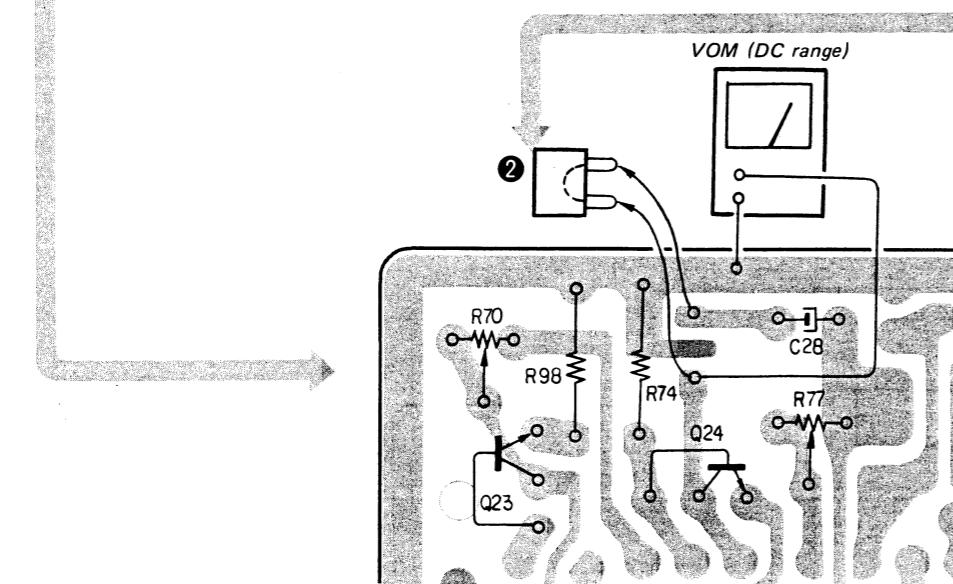
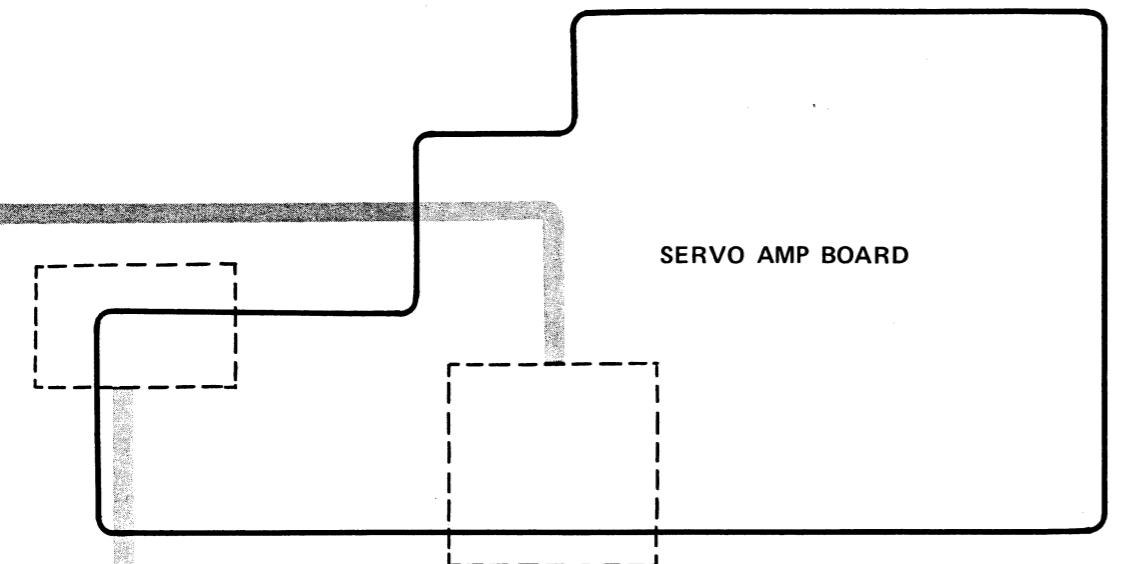
Fig. 2-3. (c) Lead wire connection

### SECTION 3 ELECTRICAL ADJUSTMENTS



#### SPEED ADJUSTMENT OF AUTOMATIC RETURN MOTOR

1. Depress the REJECT button to rotate the motor.
2. Adjust R90 (1) for the  $270\pm30$  Hz reading on the digital frequency counter.



#### AUTOMATIC RETURN ADJUSTMENT

A. Lamp Brightness Adjustment

1. Remove the connector (2).
2. Set the tonearm fully close to the center of turntable. Adjust R70 (3) for the 2 V reading on the VOM.
3. Set the tonearm fully apart from the turntable. Adjust R70 (3) for  $12\pm0.5$  V dc reading on the VOM.

B. Operational Check at Automatic Return by Using a Record.

1. Check the automatic return operation.
2. If it does not work properly, perform the following two procedures.

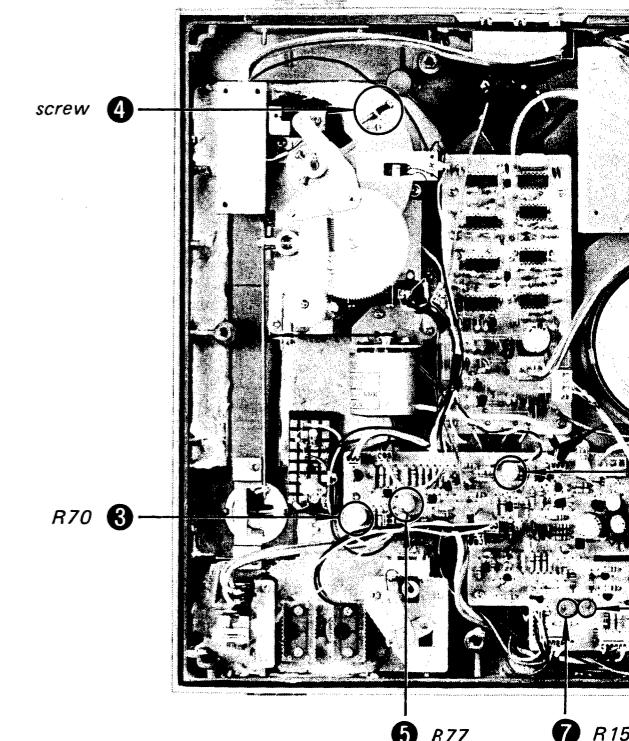
##### • Procedure (a)

Adjust the screw (4) referring to the table below.

Time of automatic return	Turning direction of the screw
Too early	Clockwise
Too late	Counterclockwise

##### • Procedure (b)

Turn carefully R77 (5) counterclockwise to make the sensitivity of automatic return detector circuit higher.



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## B. Operational Check at Automatic Return by Using a Record.

1. Check the automatic return operation.
2. If it does not work properly, perform the following two procedures.

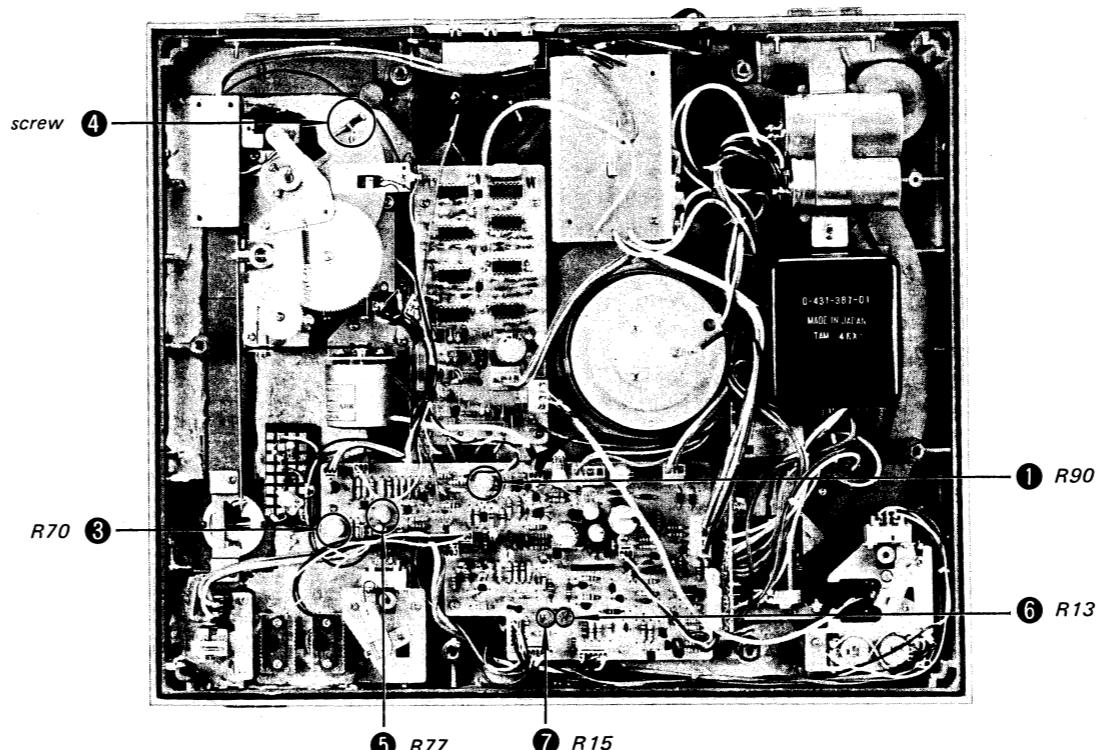
## ● Procedure (a)

Adjust the screw (4) referring to the table below.

Time of automatic return	Turning direction of the screw
Too early	Clockwise
Too late	Counterclockwise

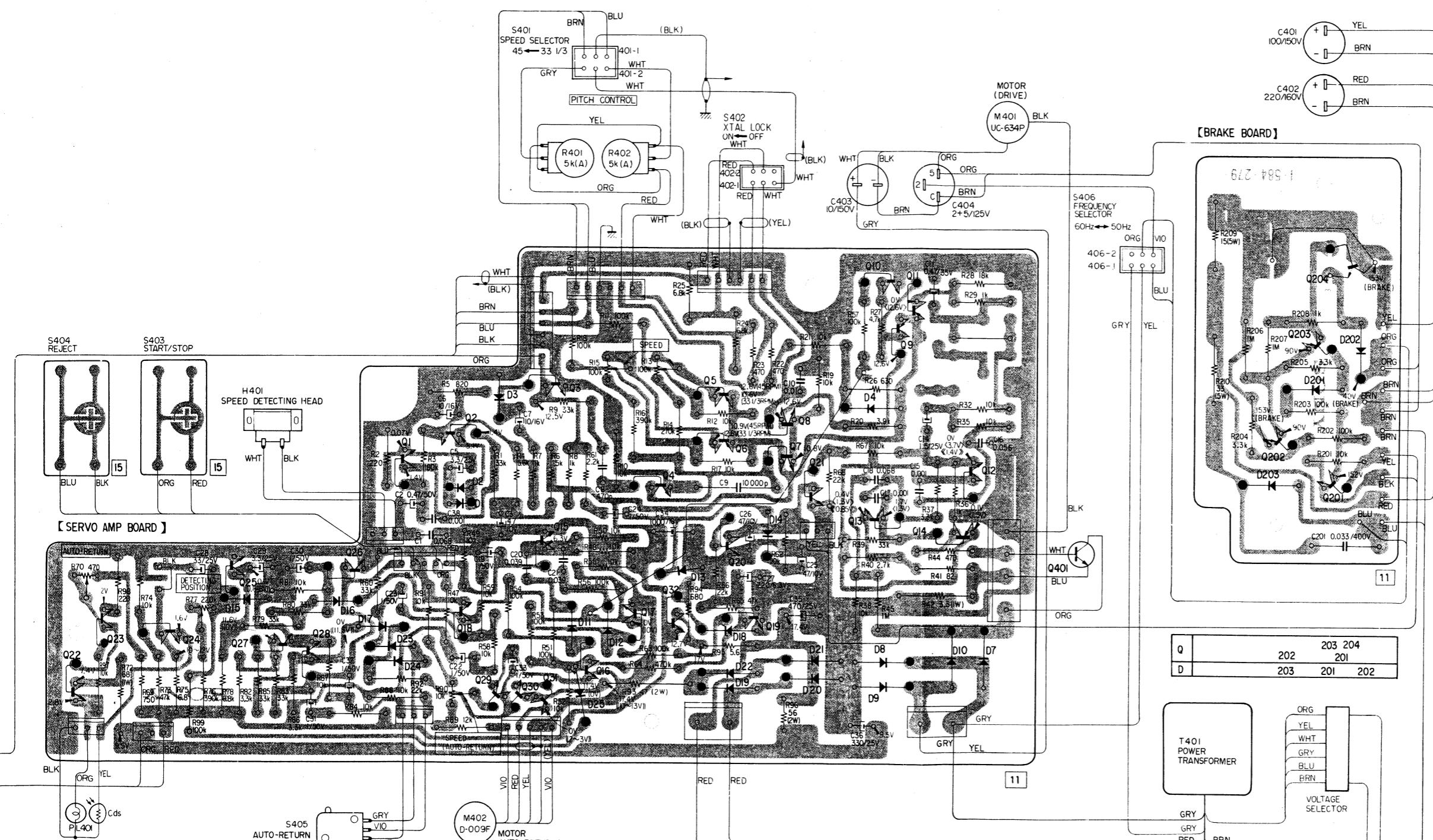
## ● Procedure (b)

Turn carefully R77 (5) counterclockwise to make the sensitivity of automatic return detector circuit higher.

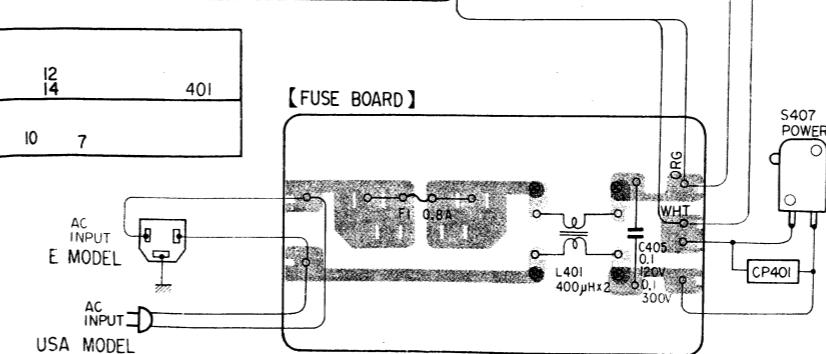
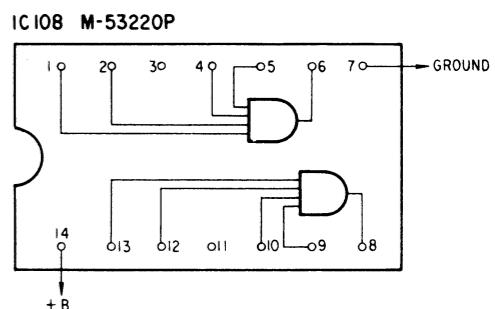
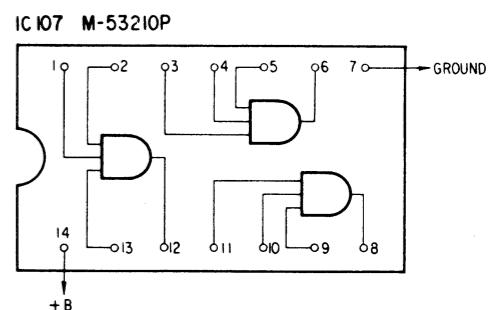
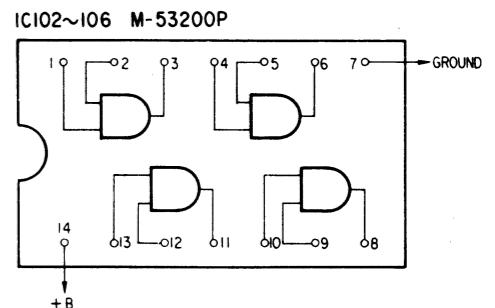
**TURNTABLE SPEED ADJUSTMENT**

1. Set the XTAL LOCK switch to OFF.
2. Set the PITCH CONTROL knob to mechanical mid.
3. To obtain the speed deviation 0% of 45 rpm and  $33\frac{1}{3}$  rpm, adjust R13 (6) for 45 rpm and R15 (7) for  $33\frac{1}{3}$  rpm.
4. Make sure that the turntable speed is within the specified Pitch Control Range ( $\pm 4\%$  for each speed) when setting the PITCH CONTROL knob to maximum or minimum.
5. Make sure that the turntable speed is 45 rpm when setting the XTAL LOCK switch to ON and it never deviate by turning the PITCH CONTROL knob. Perform the same procedure for  $33\frac{1}{3}$  rpm.
6. Make sure that the turntable speed is certainly 45 rpm after changing the START/STOP switch several times. Perform the same procedure for  $33\frac{1}{3}$  rpm.

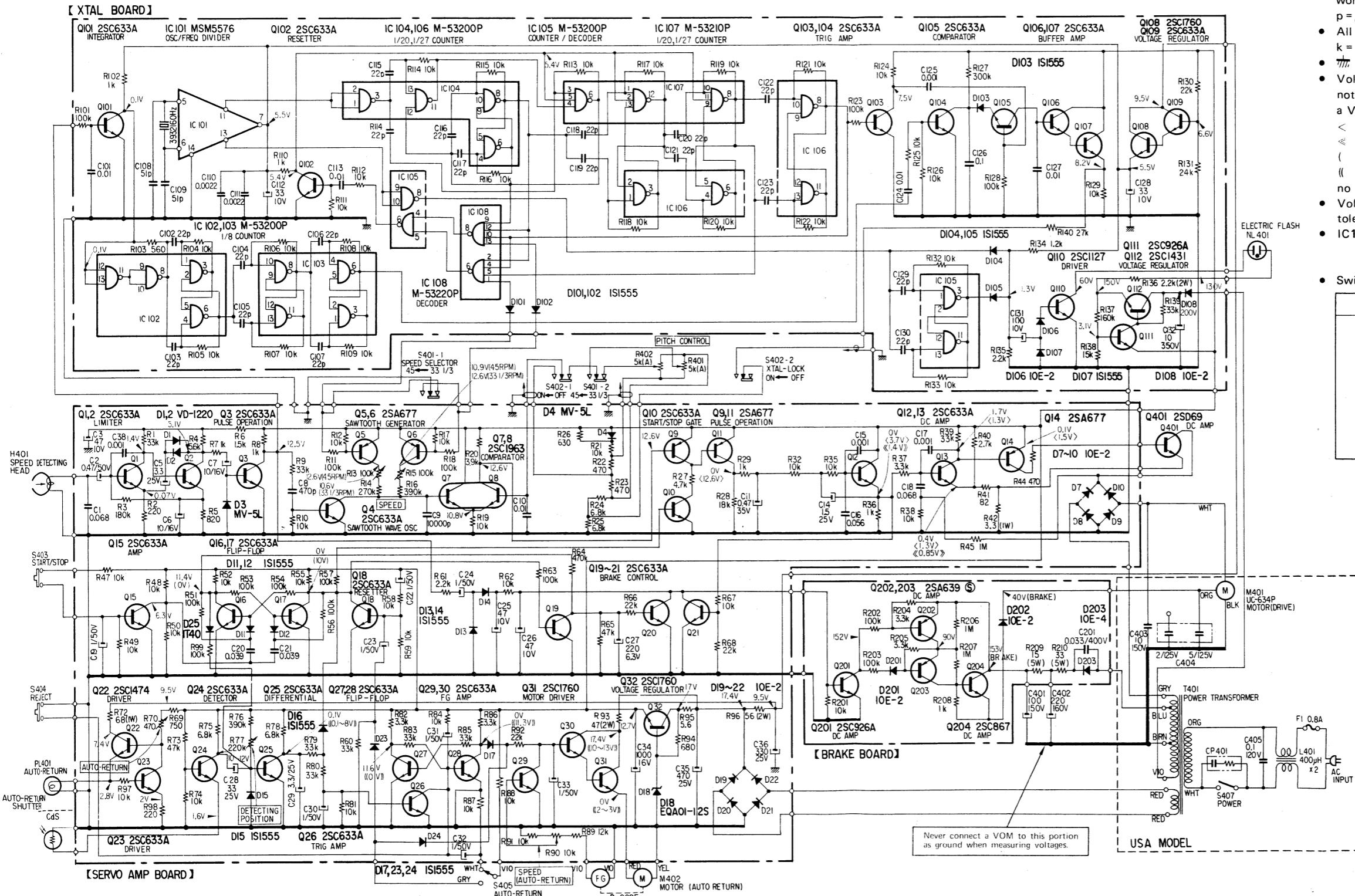




BLOCK DIAGRAMS



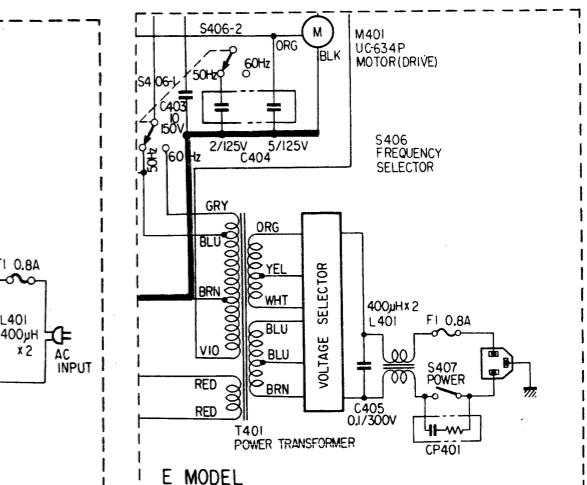
4-2. SCHEMATIC DIAGRAM



Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. 50 or less working volts are omitted except for electrolytic type.
- $\mu = \mu\text{F}$ .
- All resistors are in  $\Omega$ ,  $\frac{1}{4}\text{W}$ , unless otherwise noted.  $\text{k} = 1,000$   $\text{M} = 1,000\text{k}$
- $\text{---}$  indicates chassis ground.
- Voltages are DC with respect to ground unless otherwise noted. Readings are taken under no-signal conditions with a VOM.
- < > When ac servo motor rotates without turntable
- < > When ac servo motor rotates with turntable
- ( ) When depressing start/stop button to "START"
- (( )) When depressing reject button
- no mark: common
- Voltage variations may be noted due to normal production tolerances.
- IC102~108: Every terminal of 7 is connected to ground. Every terminal of 14 is connected to B+ circuit.
- Switch Mode:

Ref. No.	Switch	Position
S401	speed selector	33 $\frac{1}{3}$
S402	XTAL LOCK	OFF
S403	START/STOP	OFF
S404	REJECT	OFF
S405	auto-return	OFF
S406	frequency selector (E model)	50 Hz
S407	POWER	OFF

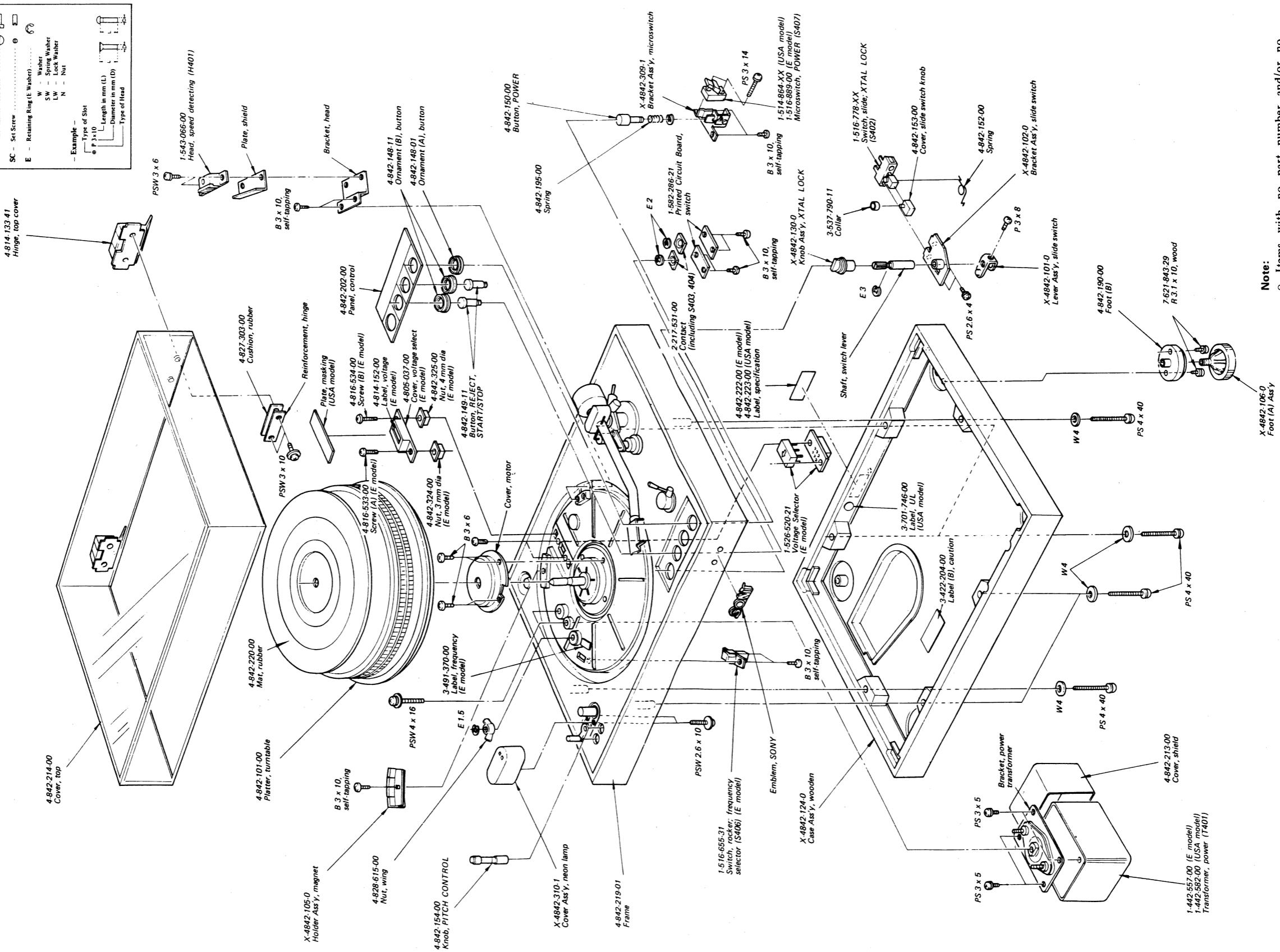


## SECTION 5

# EXPLODED VIEWS

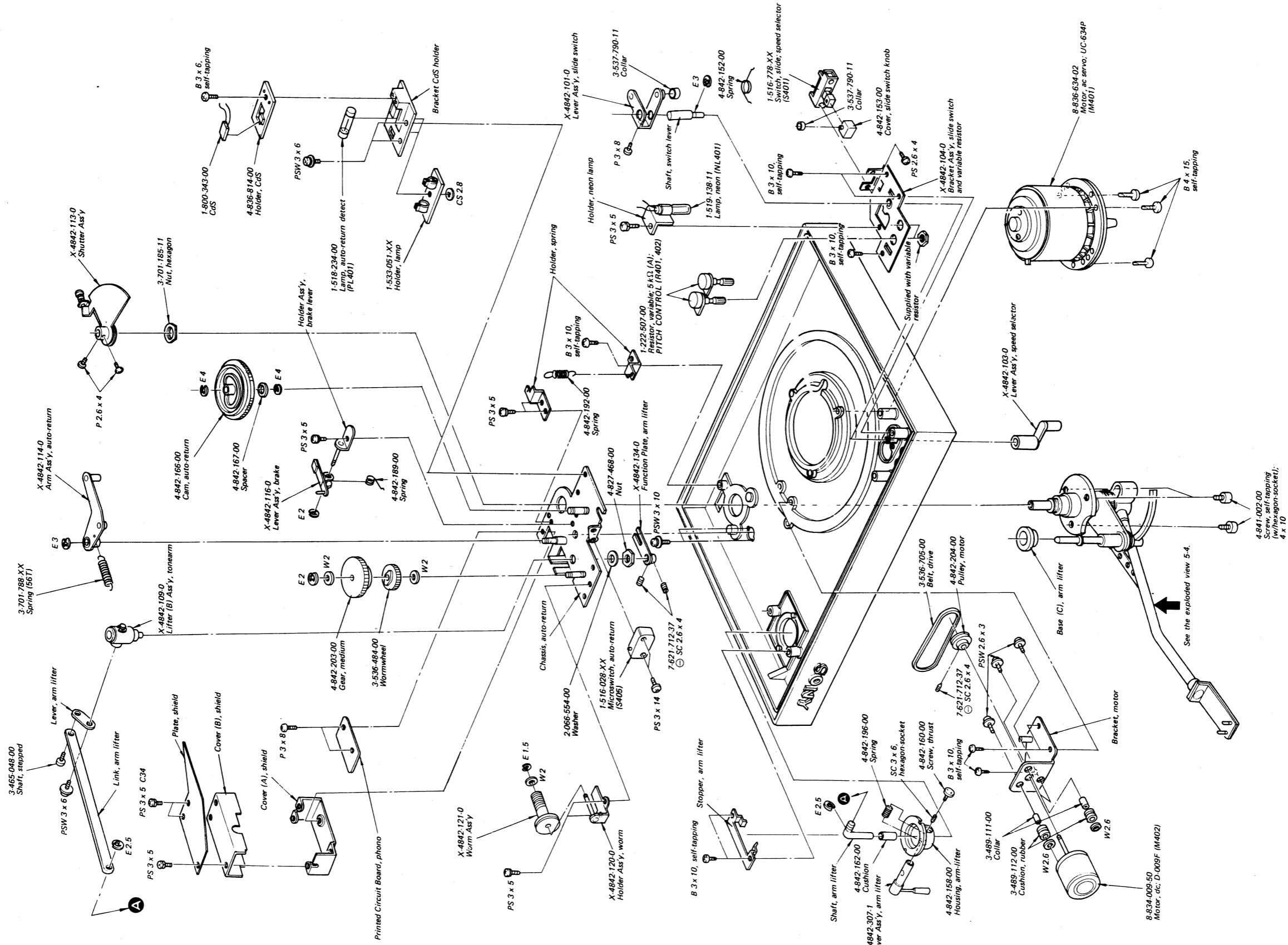
5-1.

Hardware Nomenclature	
P	Pan Head Screw .....
PS	Pan Head Screw .....
	with Spring Washer .....
K	Flat Countersunk Head Screw .....
B	Binding Head Screw .....
RK	Oval Countersunk Head Screw .....
T	Truss Head Screw .....
R	Round Head Screw .....
F	Flat Phillips Head Screw .....
SC	Set Screw .....
E	Retaining Ring (t Washer) .....
	W - Washer
	SW - Spring Washer
	LW - Lock Washer
	N - Nut
- Example -	
P x 10	
[L]	
Diameter in mm (L)	
Diameter in mm (D)	
Type of Head	



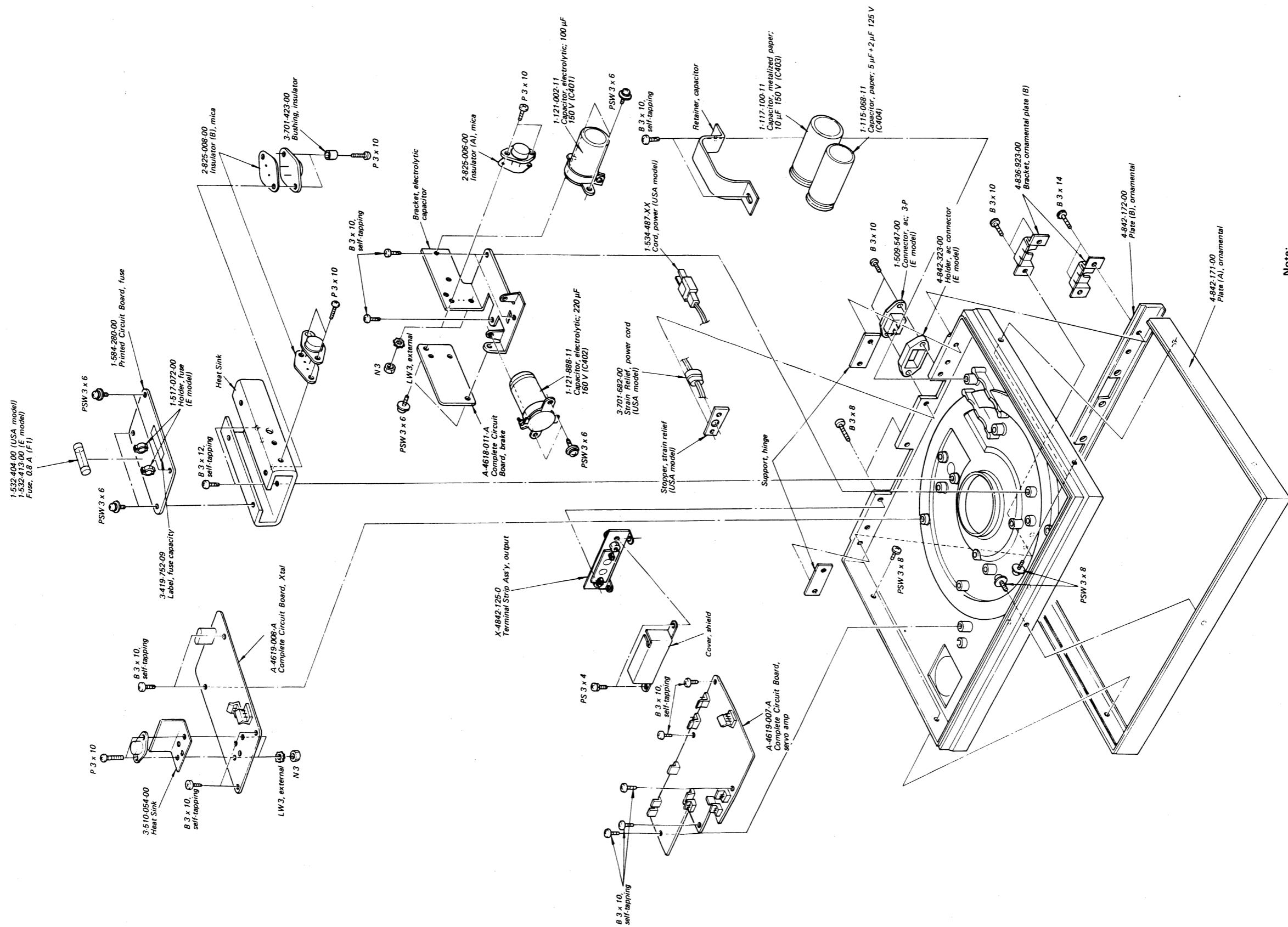
**Note:**

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head
- (□□T) shows the number of coils in spring.



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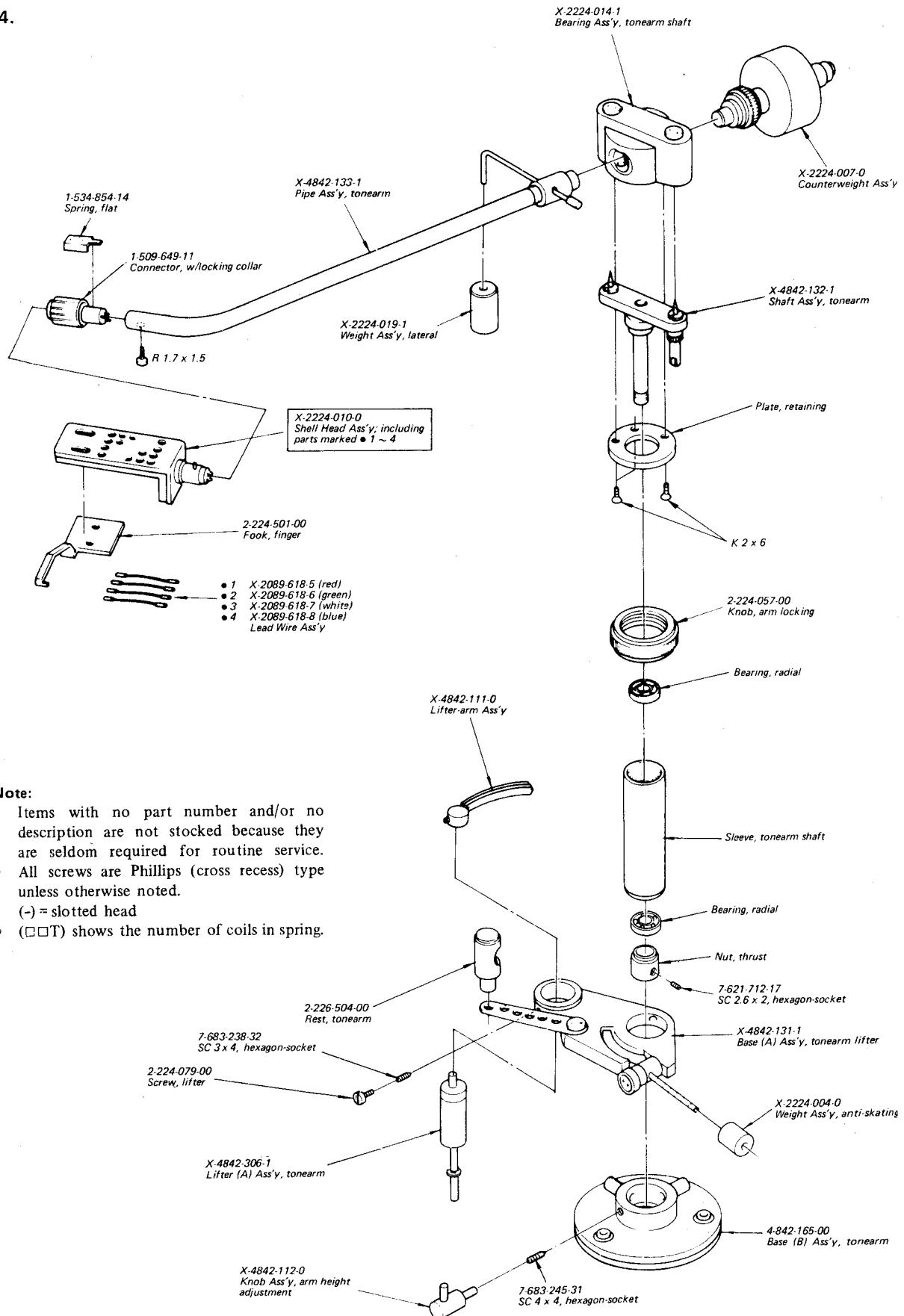
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5-4.



## SECTION 6

### ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
<b>COMPLETE CIRCUIT BOARDS</b>					
	A-4618-011-A	brake	D1,2	VD1220	
	A-4619-007-A	servo amp	D3,4	MV5L	
	A-4619-008-A	Xtal	D7~10	10E2	
			D11~17	1S1555	
			D18	EQA01-12S	
<b>PRINTED CIRCUIT BOARDS</b>					
	1-584-280-00	fuse	D23,24	2S1555	
			D25	1T40	
			D101~105	1S1555	
<b>SEMICONDUCTORS</b>					
<b>Transistors</b>					
Q1~4	2SC633A		D106	10E2	
Q5,6	2SA677		D107	1S1555	
Q7,8	2SC633A x 2		D108	10E2	
	(replacement transistor for 2SC1963)			D201,202	10E2
Q9	2SA677		D203	10E4	
Q10	2SC633A		<b>CAPACITORS</b>		
Q11	2SA677		All capacitors are in $\mu$ F and of electrolytic unless otherwise noted. (p = $\mu\mu$ F) 50 or less working volts are omitted except for electrolytic type.		
Q12~21	2SC633A		C1	1-108-847-12	0.068 mylar
Q22	2SC1474		C2	1-121-726-11	0.47 50 V
Q23~30	2SC633A		C3	1-121-352-11	47 10 V
Q31,32	2SC1760		C5	1-121-392-11	3.3 25 V
Q101~107	2SC633A		C6,7	1-121-651-11	10 16 V
Q108	2SC1760		C8	1-102-836-11	470 p ceramic
Q109	2SC633A		C9	1-103-043-11	10000 p styrol
Q110	2SC1127		C10	1-108-837-12	0.01 mylar
Q111	2SC926A		C11	1-121-726-11	0.47 50 V
Q112	2SC1431		C14	1-131-237-11	1.5 25 V tantalum
Q201	2SC926A		C15	1-108-825-12	0.001 mylar
Q202,203	2SA639S		C16	1-108-846-12	0.056 mylar
Q204	2SC867		C17	1-108-825-12	0.001 mylar
Q401	2SD69		C18	1-108-847-12	0.068 mylar
<b>ICs</b>					
IC101	MSM5576		C19	1-121-391-11	1 50 V
IC102~106	M53200P		C20,21	1-108-844-12	0.039 mylar
IC107	M53210P		C22~24	1-121-391-11	1 50 V
IC108	M53220P		C25,26	1-121-352-11	47 10 V
			C27	1-121-419-11	220 6.3 V

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	
C28	1-121-404-11	33	25 V	R42	1-212-366-11	3.3	1 W carbon
C29	1-121-392-11	3.3	25 V	R70	1-222-701-00	470	adjustable
C30~33	1-121-726-11	1	50 V	R72	1-213-129-11	68	1 W metal-oxide
C34	1-121-245-11	1000	16 V	R77	1-222-994-00	220 k	adjustable
C35	1-121-410-11	470	25 V	R90	1-222-805-00	10 k	adjustable
C36	1-121-245-11	330	25 V	R93	1-206-122-11	420	2 W metal-oxide
C38	1-108-825-12	0.001	mylar	R96	1-206-481-11	56	2 W metal-oxide
C101	1-108-833-12	0.01	mylar	R136	1-206-672-11	2.2 k	2 W metal-oxide
C102~107	1-102-967-11	22 p	ceramic	R209	1-217-300-11	15	5 W wirewound
C108,109	1-102-491-11	51 p	ceramic	R210	1-217-304-11	33	5 W wirewound
C110,111	1-101-919-11	0.0022	ceramic	R401,402	1-222-507-00	5 k (A), variable; PITCH CONTROL	
C112	1-131-195-11	33	10 V tantalum				
C113	1-108-833-12	0.01	mylar				<b>SWITCHES</b>
C114~123	1-102-967-11	22 p	ceramic	S401,402	1-516-778-XX	Slide, speed selector, XTAL LOCK	
C124	1-108-833-12	0.01	mylar	S403,404	1-516-778-XX	START/STOP, REJECT (included in contact)	
C125	1-101-001-11	0.001	ceramic	S405	1-516-028-XX	Micro, auto-return	
C126	1-108-816-12	0.1	mylar	S406	1-516-655-31	Rocker, frequency selector (E model)	
C127	1-108-833-12	0.01	mylar	S407	{ 1-514-864-XX	Micro, POWER (USA model)	
C128	1-131-195-11	33	10 V tantalum		{ 1-516-889-00	Micro, POWER (E model)	
C129,130	1-102-967-11	22 p	ceramic				
C131	1-121-414-11	100	10 V				<b>MISCELLANEOUS</b>
C132	1-123-008-11	10	350 V				
C201	1-129-720-11	0.033	400 V plastic	CP401	1-101-534-00	Encapsulated Component	
C401	1-121-002-11	100	150 V	F1	{ 1-532-404-00	Fuse, 0.8 A (USA model)	
C402	1-121-888-11	220	160 V		{ 1-532-413-00	Fuse, 0.8 A (E model)	
C403	1-117-100-11	10	150 V metalized paper	H401	1-543-066-00	Head, speed detecting	
C404	1-115-068-11	5 + 2	125 V paper	M401	8-836-634-02	Motor, ac servo; UC-634P	
C405	{ 1-108-747-22	0.1	300 V mylar (E model)	M402	8-834-009-50	Motor, dc; D-009F	
	{ 1-108-747-11	0.1	120 V mylar (USA model)				
<b>RESISTORS</b>				NL401	1-519-138-11	Lamp, neon	
All resistors are in ohms. Regular-type $\frac{1}{4}$ W carbon and composition resistors are omitted. Check schematic diagram for resistance values. k = 1000				PL401	1-518-234-00	Lamp, auto-return detect	
				T401	{ 1-442-557-00	Transformer, power (E model)	
					{ 1-442-582-00	Transformer, power (USA model)	
				L401	1-421-302-22	Coil, line filter	
					1-509-547-00	Connector, ac; 3-p (E model)	
					1-509-649-11	Connector, w/locking collar	
					1-517-072-00	Holder, fuse (E model)	
					1-526-520-21	Voltage Selector (E model)	
					1-527-903-00	Crystal	
					1-533-051-XX	Holder, lamp	
					1-534-487-XX	Cord, power (USA model)	
					1-534-854-14	Spring, flat	
					1-800-343-00	Cds	

**ACCESSORIES**

<u>Part No.</u>	<u>Description</u>
X-2224-011-0	Screw Ass'y, cartridge
1-534-551-XX	Cord, power (E model)
1-551-085-11	Cord, phono
2-089-697-00	Screwdriver
2-224-086-00	Sub-weight
3-780-752-11	Manual, instruction (E model)
3-780-752-21	Manual, instruction (USA model)
3-793-395-13	Gauge, overhang adjustment
4-808-461-00	Adaptor, 45 rpm